

WHAT IS CLAIMED IS:

1 1. A user interface for an ultrasonic imaging system, the user interface comprising:
2 a set of display and user interaction areas including
3 an image area configured to display ultrasonic images;
4 a control area including
5 elements configured to enable a user to access a plurality of
6 operation modes, said elements having active behavior that
7 provides timely user control of the ultrasonic imaging system
8 whereby each of the display areas can interact with the user
9 independently in order to provide timely response to specific user
10 requests.

1 2. The user interface of claim 1, wherein the image area is further configured to
2 display patient information fields.

1 3. The user interface of claim 1, wherein the image area is further configured to
2 display patient information retrieved from a patient information database using active
3 database components.

1 4. The user interface of claim 1, wherein the image area is further configured to
2 display system configuration information using active display elements.

1 5. The user interface of claim 1, wherein the active behavior of the elements is based
2 on context.

1 6. The user interface of claim 1, wherein the active behavior of the elements is based
2 on a history of user interactions with the ultrasonic imaging system.

1 7. The user interface of claim 1, wherein the active behavior of the elements is based
2 on a state of the ultrasonic imaging system.

1 8. The user interface of claim 1, wherein the elements are configured to accept input
2 in the form of voice commands.

1 9. The user interface of claim 1, further comprising a virtual keyboard configured to
2 allow the user to interact with the elements.

1 10. The user interface of claim 9, wherein the virtual keyboard includes user
2 programmable function keys.

1 11. The user interface of claim 9, wherein the virtual keyboard is configured to accept
2 input in the form of voice commands.

1 12. The user interface of claim 9, wherein the virtual keyboard is configured to accept
2 input via a touchscreen.

1 13. The user interface of claim 1, wherein the plurality of operation modes includes a
2 patient information mode, an image mode selection mode, an image acquisition mode,
3 and a system configuration mode.

1 14. The user interface of claim 1, wherein the plurality of operation modes includes
2 an archive mode that is configured to enable patient information to be saved to a patient
3 information database.

1 15. The user interface of claim 1, wherein the plurality of operation modes includes
2 an annotation mode configured to enable the user to attach annotations to a stored
3 ultrasonic image.

1 16. The user interface of claim 15, wherein the annotation mode enables the user to
2 attach a text annotation to the stored ultrasonic image.

1 17. The user interface of claim 15, wherein the annotation mode enables the user to
2 attach a voice annotation to the stored ultrasonic image.

1 18. The user interface of claim 1, wherein the ultrasonic imaging system is portable.

1 19. The user interface of claim 1, wherein the control area includes at least one tab
2 selectable by the user to select one of the plurality of operation modes.

- 1 20. The user interface of claim 1, wherein the control area includes a tab selectable by
- 2 the user to expand the image area to a full screen view.

1 21. A user interface for an ultrasonic imaging system, the user interface comprising:
2 a set of display and user interaction areas including
3 an image area configured to display ultrasonic images;
4 a control area including
5 elements configured to enable a user to access a plurality of
6 operation modes, said elements having intelligent behavior that
7 provides optimized user control of the ultrasonic imaging system
8 whereby each of the display areas can interact with the user -
9 independently in order to provide timely response to specific user
10 requests.

1 22. The user interface of claim 21, wherein the image area is further configured to
2 display patient information fields.

1 23. The user interface of claim 21, wherein the image area is further configured to
2 display patient information retrieved from a patient information database.

1 24. The user interface of claim 21, wherein the image area is further configured to
2 display system configuration information.

1 25. The user interface of claim 21, wherein the intelligent behavior of the elements
2 includes auto-adaptive behavior.

1 26. The user interface of claim 21, wherein the intelligent behavior of the elements is
2 based on context.

1 27. The user interface of claim 21, wherein the intelligent behavior of the elements is
2 based on a history of user interactions with the ultrasonic imaging system.

1 28. The user interface of claim 21, wherein the intelligent behavior of the elements is
2 based on a state of the ultrasonic imaging system.

1 29. The user interface of claim 21, wherein the elements are configured to accept
2 input in the form of voice commands.

1 30. The user interface of claim 21, further comprising a virtual keyboard configured
2 to allow the user to interact with the elements.

1 31. The user interface of claim 30, wherein the virtual keyboard includes user
2 programmable function keys.

1 32. The user interface of claim 30, wherein the virtual keyboard is configured to
2 accept input in the form of voice commands.

1 33. The user interface of claim 30, wherein the virtual keyboard is configured to
2 accept input via a touchscreen.

1 34. The user interface of claim 21, wherein the plurality of operation modes includes
2 a patient information mode, an image mode selection mode, an image acquisition mode,
3 and a system configuration mode.

1 35. The user interface of claim 21, wherein the plurality of operation modes includes
2 an archive mode that is configured to enable patient information to be saved to a patient
3 information database.

1 36. The user interface of claim 21, wherein the plurality of operation modes includes
2 an annotation mode configured to enable the user to attach annotations to a stored
3 ultrasonic image.

1 37. The user interface of claim 36, wherein the annotation mode enables the user to
2 attach a text annotation to the stored ultrasonic image.

1 38. The user interface of claim 36, wherein the annotation mode enables the user to
2 attach a voice annotation to the stored ultrasonic image.

1 39. The user interface of claim 21, wherein the ultrasonic imaging system is portable.

1 40. The user interface of claim 21, wherein the control area includes at least one tab
2 selectable by the user to select one of the plurality of operation modes.

- 1 41. The user interface of claim 21, wherein the control area includes a tab selectable
- 2 by the user to expand the image area to a full screen view.

1 42. A user interface for an ultrasonic imaging system, the user interface comprising:
2 a plurality of display areas, at least one of the plurality of display areas including
3 at least one independent element operable to receive user input and
4 maintain a history of user interaction,
5 the at least one independent element having behavior that depends upon
6 input and the history of user interaction.

1 43. The user interface of claim 42, wherein each of the plurality of display areas is
2 resizable by a user.

1 44. The user interface of claim 42, wherein each of the plurality of display areas is
2 repositionable by a user.

1 45. The user interface of claim 42, wherein at least one of the plurality of display
2 areas is configured to display ultrasonic image data.

1 46. The user interface of claim 42, wherein at least one of the plurality of display
2 areas is configured to display system information.

1 47. A user interface comprising:
2 a plurality of operation modes including an image acquisition mode, a system
3 configuration mode, a measure and annotate mode, an archiving mode, and a
4 system services mode; and
5 a display view shown on a display device, the display view including an image area and a
6 control area,
7 the image area configured to display an image generated in accordance with the image
8 acquisition mode, and
9 the control area configured to enable selection of one of the plurality of operation modes.

1 48. The user interface of claim 47, wherein the display view includes a plurality of windows,
2 each of the windows being resizable and repositionable within the display view.

1 49. The user interface of claim 48, wherein the control area is configured to enable a user to
2 hide all windows in the display view except for the image area, which then automatically
3 expands to occupy the entire display view.

1 50. The user interface of claim 47, wherein the control area includes at least one tab
2 selectable by a user to select one of the plurality of operation modes.

1 51. The user interface of claim 50, wherein the control area includes at least one tab
2 selectable by the user to select at least one mode within a selected operation mode.

1 52. The user interface of claim 47, wherein the control area includes a virtual keyboard.

1 53. A user interface comprising:
2 an image view configured to display an ultrasound image; and
3 a control view configured to present controls to a user, the control view including active
4 elements, each active element having context-dependent behavior, and each active
5 element configured to maintain a history of user interactions with that active
6 element;
7 the control view further including intelligent elements, each intelligent element
8 configured to provide auto-adaptive interactions between the user and the user
9 interface.